



## CONTENTS OF VOLUME 44

## Number 1

Notched strength of fabric laminates. I: Prediction . . . . .	1
N. K. NAIK & P. S. SHEMBEKAR (India)	
Notched strength of fabric laminates. II: Effect of stacking sequence . . . . .	13
P. S. SHEMBEKAR & N. K. NAIK (India)	
Non-homogeneous bars under tension, pure bending and thermal loads . . . . .	21
HELMUT RAPP (Germany)	
Permittivity of dilute fiber suspension . . . . .	29
PHILIP C. STURMAN & R. L. McCULLOUGH (USA)	
The influence of mechanical conditioning on the viscoelastic behaviour of short-fibre glass reinforced epoxy resin (GRP) . . . . .	43
R. D. DONOGHUE, P. W. M. PETERS & G. MARCI (Germany)	
Stress analysis and the testing of Celanese and IITRI compression specimens . . . . .	57
SENG C. TAN (USA)	
Thermal effective stress concentration problems in metal composites . . . . .	71
SHYONG LEE, HSI-MING PAN (Taiwan) & JEFF WOLFENSTINE (USA)	
Effect of matrix content on strength and wear of woven roving glass polymeric composites . . . . .	77
B. VISHWANATH, A. P. VERMA & C. V. S. KAMESWARA RAO (India)	
<b>Technical Note</b>	
A note on the investigation of the composite interphase by means of thermal analysis . . . . .	87
J. L. THOMASON (The Netherlands)	
Conference Diary . . . . .	91

## Number 2

Prediction of thermoelastic properties of composite laminates with matrix cracks . . . . .	95
PETER GUDMUNDSON & SÖREN ÖSTLUND (Sweden)	
Impact behavior and impact-fatigue testing of polymer composites . . . . .	107
B. P. JANG, W. KOWBEL & B. Z. JANG (USA)	
Tensile, flexural and impact properties of a thermoplastic matrix reinforced by glass fiber and glass bead hybrids . . . . .	119
ULKU YILMAZER (Turkey)	
Mechanisms of failure of polymeric resins reinforced with high-modulus polyethylene fibres—A microscopy investigation . . . . .	127
N. H. LADIZESKY & M. K. M. PANG (Hong Kong)	
The effect of damage on the durability of a sand-filled GRP sewer lining under acidic stress corrosion conditions . . . . .	137
S.-W. TSUI & F. R. JONES (UK)	
The limitation of effective moduli in analysis of fibrous composite materials . . . . .	145
LIN YE (Peoples' Republic of China)	
Transient waves in six-ply and eight-ply fibre composite plates . . . . .	151
W. A. GREEN, G. A. ROGERSON (UK) & D. I. MILOSAVLJEVIĆ (Yugoslavia)	
Fatigue damage mechanics of composite materials. I: Experimental measurement of damage and post-fatigue properties . . . . .	159
S. M. SPEARING & P. W. R. BEAUMONT (UK)	



## CONTENTS OF VOLUME 44

## Number 1

Notched strength of fabric laminates. I: Prediction . . . . .	1
N. K. NAIK & P. S. SHEMBEKAR (India)	
Notched strength of fabric laminates. II: Effect of stacking sequence . . . . .	13
P. S. SHEMBEKAR & N. K. NAIK (India)	
Non-homogeneous bars under tension, pure bending and thermal loads . . . . .	21
HELMUT RAPP (Germany)	
Permittivity of dilute fiber suspension . . . . .	29
PHILIP C. STURMAN & R. L. McCULLOUGH (USA)	
The influence of mechanical conditioning on the viscoelastic behaviour of short-fibre glass reinforced epoxy resin (GRP) . . . . .	43
R. D. DONOGHUE, P. W. M. PETERS & G. MARCI (Germany)	
Stress analysis and the testing of Celanese and IITRI compression specimens . . . . .	57
SENG C. TAN (USA)	
Thermal effective stress concentration problems in metal composites . . . . .	71
SHYONG LEE, HSI-MING PAN (Taiwan) & JEFF WOLFENSTINE (USA)	
Effect of matrix content on strength and wear of woven roving glass polymeric composites . . . . .	77
B. VISHWANATH, A. P. VERMA & C. V. S. KAMESWARA RAO (India)	
<b>Technical Note</b>	
A note on the investigation of the composite interphase by means of thermal analysis . . . . .	87
J. L. THOMASON (The Netherlands)	
Conference Diary . . . . .	91

## Number 2

Prediction of thermoelastic properties of composite laminates with matrix cracks . . . . .	95
PETER GUDMUNDSON & SÖREN ÖSTLUND (Sweden)	
Impact behavior and impact-fatigue testing of polymer composites . . . . .	107
B. P. JANG, W. KOWBEL & B. Z. JANG (USA)	
Tensile, flexural and impact properties of a thermoplastic matrix reinforced by glass fiber and glass bead hybrids . . . . .	119
ULKU YILMAZER (Turkey)	
Mechanisms of failure of polymeric resins reinforced with high-modulus polyethylene fibres—A microscopy investigation . . . . .	127
N. H. LADIZESKY & M. K. M. PANG (Hong Kong)	
The effect of damage on the durability of a sand-filled GRP sewer lining under acidic stress corrosion conditions . . . . .	137
S.-W. TSUI & F. R. JONES (UK)	
The limitation of effective moduli in analysis of fibrous composite materials . . . . .	145
LIN YE (Peoples' Republic of China)	
Transient waves in six-ply and eight-ply fibre composite plates . . . . .	151
W. A. GREEN, G. A. ROGERSON (UK) & D. I. MILOSAVLJEVIĆ (Yugoslavia)	
Fatigue damage mechanics of composite materials. I: Experimental measurement of damage and post-fatigue properties . . . . .	159
S. M. SPEARING & P. W. R. BEAUMONT (UK)	

Fatigue damage mechanics of composite materials. II: A damage growth model . . .	169
S. M. SPEARING, P. W. R. BEAUMONT & M. F. ASHBY (UK)	

**Book Reviews**

<i>Mechanical Properties of Reinforced Thermoplastics</i> . Edited by D. W. Clegg and A. A. Collyer. Elsevier Applied Science Publishers, London, 1986 . . . . .	179
(Reviewed by M. G. Phillips)	
<i>Application of Fracture Mechanics to Composite Materials</i> . Edited by Klaus Friedrich. Elsevier Science Publishers, Amsterdam, 1989 . . . . .	180
(Reviewed by I. K. Partridge)	
<i>Inelastic Deformation of Composite Materials</i> . IUTAM Symposium, Troy, New York, 29 May–1 June 1990. Edited by George J. Dvorak. Springer-Verlag, 1991 . .	180
(Reviewed by J. W. Hutchinson)	
Conference Diary . . . . .	182

*Number 3*

A study of the effects of oxygen plasma treatment on the adhesion behaviour of polyethylene fibres . . . . .	185
B. TISSINGTON, G. POLLARD & I. M. WARD (UK)	
A study of the impact behaviour of ultra-high-modulus polyethylene fibre composites .	197
B. TISSINGTON, G. POLLARD & I. M. WARD (UK)	
Some relationships and limitations of tensorial polynomials strength theories . . . .	209
ANDRZEJ P. WILCZYNSKI (Poland)	
The effect of an interphase on the stress and energy distribution in the embedded single fibre test . . . . .	215
A. DI ANSELMO, M. L. ACCORSI & A. T. DiBENEDETTO (USA)	
Linear and non-linear failure analysis of composite laminates with transverse shear . .	227
Y. S. N. REDDY & J. N. REDDY (USA)	
Matrix crack initiation in ceramic matrix composites Part I: Experiments and test results . . . . .	257
MICHEL W. BARSOUM, PRAMOD KANGUTKAR & A. S. D. WANG (USA)	
Matrix crack initiation in ceramic matrix composites Part II: Models and simulation results . . . . .	271
A. S. D. WANG, X. G. HUANG & MICHEL W. BARSOUM (USA)	
Conference Diary . . . . .	283

*Number 4*

Transient creep behavior of a metal matrix composite with a dilute concentration of randomly oriented spheroidal inclusions . . . . .	287
Y. M. WANG, Y. P. QIU & G. J. WENG (USA)	
Fatigue damage mechanics of composite materials Part III: Prediction of post-fatigue strength . . . . .	299
S. M. SPEARING & P. W. R. BEAUMONT (UK)	
Fatigue damage mechanics of composite materials Part IV: Prediction of post-fatigue stiffness . . . . .	309
S. M. SPEARING, P. W. R. BEAUMONT & P. A. SMITH (UK)	
The influence of interphase regions on local thermal displacements in composites . .	319
N. R. SOTTOS, R. L. McCULLOUGH & W. R. SCOTT (USA)	
Control of interfacial adhesion in continuous carbon and Kevlar fiber reinforced polymer composites . . . . .	333
BOR Z. JANG (USA)	
Anodic oxidation of pitch-precursor carbon fibers in ammonium sulfate solutions: Batch screening treatment results . . . . .	351
TODD R. KING, DONALD F. ADAMS & DANIEL A. BUTTRY (USA)	

Influence of artificial pre-stressing during curing of CFRP laminates on interfibre transverse cracking . . . . .	361
K. SCHULTE & R. MARISSEN (Germany)	
On the mechanical behavior of aluminum alloys reinforced by long or short alumina fibers of SiC whiskers . . . . .	369
M. TOURATIER, A. BEAKOU & J. Y. CHATELLIER (France)	
Conference Diary . . . . .	385
Subject Index . . . . .	389
Author Index . . . . .	391

